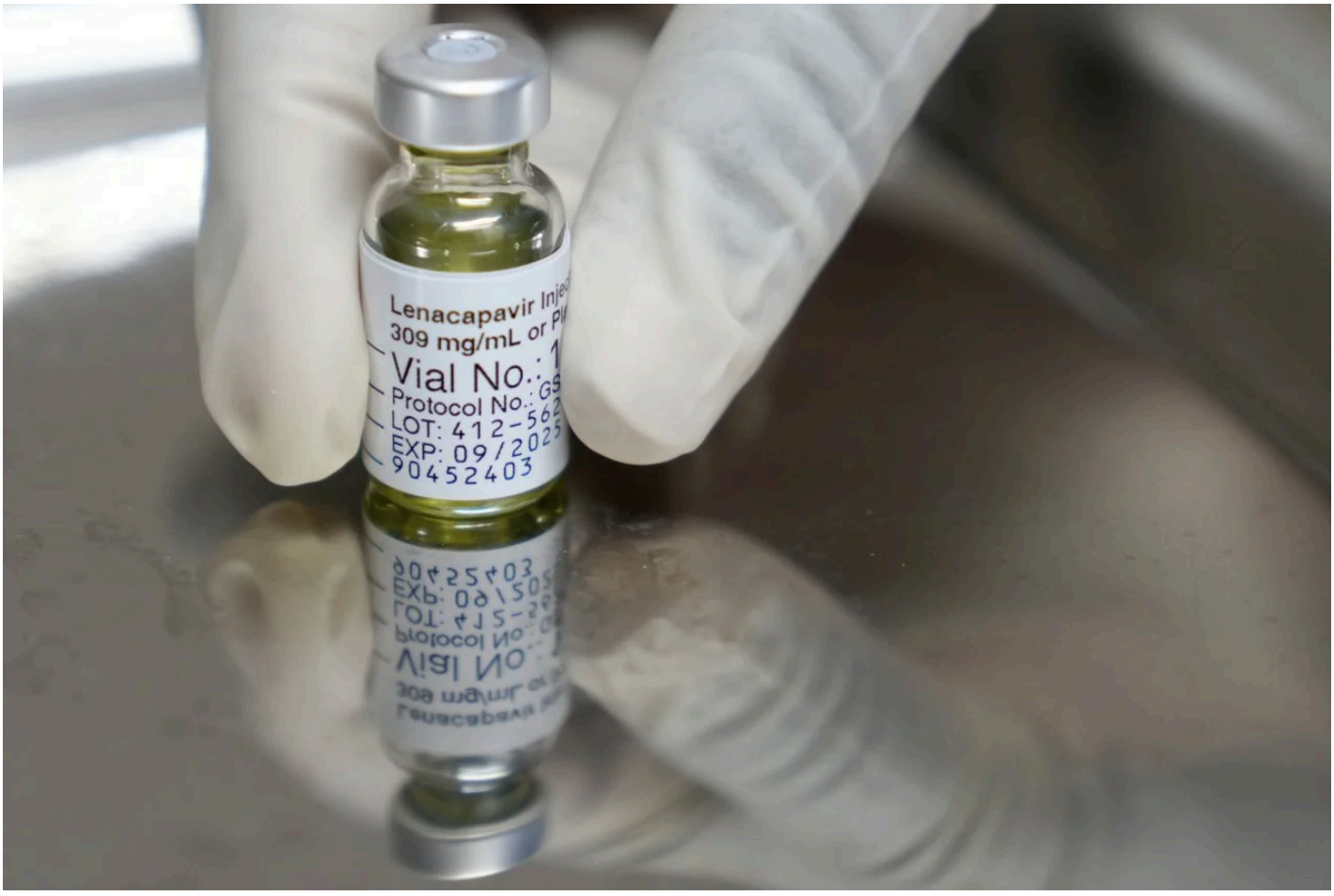
The Saturday Paper

NEWS

A new twice-yearly antiviral injection that can prevent HIV is likely to be approved soon in Australia. Making it affordable will be the next challenge. By *Bianca Nogrady*.

Will miracle HIV drug go on the PBS?



The game-changing HIV antiretroviral drug lenacapavir. CREDIT: NARDUS ENGELBRECHT / AP

Standing ovations are rare at scientific conferences. Infectious diseases physician Professor Sharon Lewin, director of the Peter Doherty Institute for Infection and Immunity in Melbourne, still gets "tingly" at the memory of about 10,000 attendees surging to their feet at the 25th International AIDS Conference in Munich a year ago.

The results that inspired the ovation were of the PURPOSE 1 clinical trial, which found that a six-monthly injectable antiretroviral drug called lenacapavir was

100 per cent effective at preventing HIV infection.

On June 18 this year, the United States Food and Drug Administration approved twice-yearly injectable lenacapavir for HIV prevention. Drug regulators around the world – including Australia – are likely to follow suit.

Lenacapavir has been used as a treatment for drug-resistant HIV infection since 2022. The discovery that it is also effective at preventing HIV infection with just two treatments a year is being heralded as a game changer in the fight against HIV.

"As in all new drugs, first step is the discovery of the drug, second is to show the level of efficacy – which for lenacapavir is pretty stunning – and a third step is, of course, to get approval," says Lewin, who is a former president of the International AIDS Society. "But that's only halfway there; the next real challenge is how you implement such a dramatically powerful tool."

Given lenacapavir's yearly price tag of about $43,000 for two six-monthly injections, that implementation could be extremely challenging. A recent study estimated the drug could be manufactured for as little as $62 a year, prompting organisations including UNAIDS and the Foundation for AIDS Research (amfAR), and HIV researchers and clinicians around the world, to call for manufacturer Gilead Sciences to make the drug available at an affordable price.

That may just have become more difficult in Australia, where the government must negotiate a price with Gilead before the drug can be subsidised through the Pharmaceutical Benefits Scheme.

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Recent experience with another new HIV prevention drug – the two-monthly, long-acting injectable drug cabotegravir (CAB-LA) – suggests that will be a difficult process. "ViiV Healthcare spent a long time trying to negotiate a PBS pricing for CAB-LA, which never was able to be met, which was hugely disappointing for community and for the sector," says Jessica Michaels, deputy

chief executive of the Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine.

Moreover, new PBS listings have stalled following United States President Donald Trump's executive order in May demanding that the US pay no more for medicines than the lowest price paid by peer nations. The US pharmaceutical lobby is pushing for Trump to "leverage ongoing trade negotiations" to allow drug companies to charge higher prices for countries such as Australia that subsidise medicine.

At the same time, the administration is gutting funding for international programs that supply HIV drugs in low- and middle-income countries.

United Nations Sustainable Development Goal number 3.3 is to end the epidemic of AIDS worldwide by 2030, among other widespread diseases. One element of that goal, set by UNAIDS, is to reduce new HIV infections by 90 per cent from 2010 levels, and continue a 5 per cent decline year on year after that.

Lenacapavir's greatest impact is likely to be in low- and middle-income countries furthest from achieving those targets. "Where a drug like this is going to have incredible power is in those populations who we know have real difficulty with ongoing pill-taking, and particularly we're talking about women in Africa," says bioethicist and public health researcher Bridget Haire, an associate professor at the UNSW Sydney School of Population Health/Kirby Institute.

"There's just been so much data on regimens that require people to take a pill every day just not working, and so if you can replace that with something, an injection that you could get every second time you go in for your contraceptive injection, that is really game changing."

But if $43,000 a year is challenging in Australia, it's prohibitive in sub-Saharan Africa. Recognising the importance of access to lenacapavir for bringing an end to the HIV epidemic – and the optics of putting a hefty price tag on a drug whose greatest benefit will be for women and girls in nations where many live in extreme poverty – the manufacturer Gilead has already signed agreements with generic drug manufacturers to provide access across 120 high-incidence, resource-limited countries.

"Gilead is planning to provide Gilead-supplied product at no profit in those countries, until generic manufacturers are able to fully support demand in countries covered by the voluntary licensing agreements," a spokesperson for the company said in a statement.

Australia is closer to the UN goals than most countries. Here, about 29,000 people are living with HIV, and new infections have been trending downwards for some time, with an overall 33 per cent reduction over the past decade.

The good news in those figures is that HIV transmission among injecting drug users and sex workers has been virtually eliminated, and some populations – gay and bisexual men in inner-city Sydney, for example – are already very close to achieving a 90 per cent reduction in new HIV infections.

That decline is partly attributable to the early and high uptake of oral pre-exposure prophylaxis, or PrEP: a daily pill containing a fixed dose of two antiretroviral medications, sold as Truvada, which is highly effective at preventing infection.

Australia was an early adopter of PrEP thanks to a large-scale implementation trial of the drug in 2016 that provided PrEP to more than 9000 gay and bisexual men at high risk of HIV. PrEP was then subsidised through the PBS from April 2018.

But PrEP isn't for everyone. Some people experience side effects from the drug, says Jessica Michaels, and it can be challenging to stick to the fairly strict daily dosing schedule necessary to maintain high levels of protection.

While some people simply take a daily dose, many take PrEP "on-demand" in anticipation of sexual activity, which is more complicated. "You have to be mindful of what tablets you need to take, when, and in what time periods, and that could be quite tricky for a lot of people," Michaels says. "Particularly if you maybe are having a very big weekend and you might be having sex over a few days, when do you start? When do you stop? And what does that look like for people?" She notes that quite a few new infections are seen in people who stop taking PrEP.

The not-so-good news with Australia's HIV infection statistics is that beyond inner-city Sydney, HIV diagnoses are declining more slowly. Among gay and bisexual men born outside Australia, there has been a small increase in the rate of new infections over the past decade.

Epidemiologist and public health physician Professor Andrew Grulich, of the Kirby Institute at UNSW Sydney, says taking PrEP can have negative associations. "We hear in some stigmatised groups people don't like the idea of having a bottle of pills in their bathroom cabinet – they might be sharing a house, they might not be out as gay men to the rest of their families," Grulich says. "In those settings, just being able to turn up at a doctor and get an injection

is vastly preferable." That's also easier for people living in rural and remote areas, where getting to see a GP who can prescribe HIV medications is hard enough, not to mention finding a pharmacist that can dispense them.

Nevertheless, lenacapavir will face a challenge in proving its economic worth compared with daily oral PrEP, which is both effective and cheap. "When you're saving a person's life with a treatment, you can justify a very high cost on the basis of cost-effectiveness," Grulich says. "But when we might, in Australia, give it to 100 people for a few years before we would prevent an HIV infection on average, that's a different equation completely."

Dash Heath-Paynter, chief executive of Health Equity Matters (formerly the Australian Federation of AIDS Organisations), says it's vital for people to have choice when it comes to HIV prevention. "Australia cannot reach its 2030 targets as quickly as it should without having widespread accessibility to this technology," he says.

"We call upon the government and the manufacturer to urgently commence negotiations around making this technology accessible to all people at risk of HIV."